

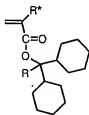
REMARKS

Applicants have amended claims 1, 7, and 11 to more particularly point out and distinctly claim the subject matter which they regard as their own invention. The amendments merely include removal of a member of the Markush group assigned to R. Applicants have also amended claim 2 to correct a typographical error. No new matter has been introduced by the above amendments.

Claims 1-16 are now pending. Reconsideration of the application, as amended, is requested in view of the remarks below.

Claims 1, 2, 7, 8, and 11-16 are rejected for obviousness over Sato et al., U.S. 6,576,392 (the '392 patent) and Sato et al., U.S. 6,420,082 (the '082 patent). Claims 1, 7, and 11 are independent and will be first discussed respectively.

Claim 1 covers a compound having the following formula:



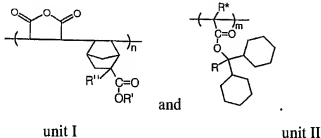
Among the variables, R is an ethyl group.

The '392 patent and the '082 patent each disclose a number of monomers that can be polymerized to prepare resins useful for positive photoresist compositions. Pointing to monomers 27-29 described in both the '392 and '082 patents, the Examiner asserts that these prior art monomers render the compound of claim 1 obvious.

Applicants disagree. The prior art monomers referred to by the Examiner are different from the claimed compound in that, while R in the latter is ethyl, the corresponding moiety to R in the former is methyl. Indeed, in all of the monomers described in the '392 and '082 patents, the corresponding moiety to R is methyl (monomers 1-32, 40, and 41) or is H or absent (monomers 33-40). Nowhere in the two references is it taught or suggested that R is ethyl. As ethyl (which has 2 carbon atoms and 5 hydrogen atoms) is much bulkier than methyl (which

contains only 1 carbon atom and 3 hydrogen atoms), one skilled in the art would not have been motivated to modify the prior art monomers described in the '392 and '082 patents by replacing methyl with the much bulkier ethyl to arrive at the claimed compound. In other words, claim 1 is not rendered obvious by the two cited references.

Turning to claim 7, it covers a terpolymer containing two repeating units shown below:



Unit I has a norbornyl moiety and a maleic anhydride moiety. Unit II specifically requires two cyclohexyl groups. The percentage of each of unit I and unit II is higher than 0.1, but lower than 0.9 (i.e., $0.1 < m < 0.9$ and $0.1 < n < 0.9$).

The '392 patent teaches a polymer containing an alicyclic moiety (corresponding to the norbornyl moiety in unit I) and an acid-soluble functional group (corresponding to unit II). The polymer may further contain a moiety converted from a comonomer (corresponding to the maleic anhydride moiety in unit I). The reference assigns 51 alternatives to the alicyclic moiety, 41 alternatives to the acid-soluble functional group, and an even larger number of alternatives to the comonomer. Although norbornyl and maleic anhydride moieties in unit I and a dihexyl acid-soluble moiety (corresponding to unit II) are among the alternatives, this reference fails to suggest that one (1) select norbornyl and maleic anhydride from the corresponding large groups, (2) combine them in a special order to form unit I, (3) select dihexyl-containing ester, i.e., unit II, from the corresponding large group, and (4) combine it with unit I to arrive at the claimed polymers, let alone the required special percentages of units I and II. Similarly, the '082 patent also fails to do so.

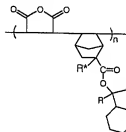
The law is clear that "[s]ome motivation to select the claimed species or subgenus [from the prior art genus] must be taught by the prior art [in order to establish the prima facie

obviousness].” See MPEP 2144.08. As mentioned above, the ‘392 and ‘082 patents teach a broad genus, but fail to suggest selecting certain variables from myriad alternatives and then combining them in a certain order to arrive at the terpolymer of claim 7, let alone the specific percentages required by this claim. According to the just-quoted MPEP statement, the two cited patents do not render claim 1 obvious.

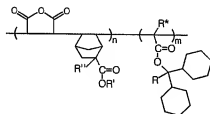
Claim 7 can also be distinguished from the prior art on a separate ground.

As discussed above, the two cited patents teach that R is methyl, but not ethyl, in monomers. Thus, they suggest that polymers resulting from these monomers have R being methyl, but ethyl. In contrast, the claimed terpolymer has R being ethyl. For the same reasons that claim 1 is not rendered obvious by the two patents, neither is claim 7.

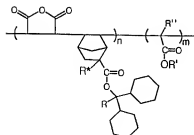
Applicants finally turn to claim 11, which covers a composition containing a polymer having one of the following three formulas:



formula (3)



formula (4)



formula (5).

The polymer of formula (3) contains a maleic anhydride moiety, a norbornyl moiety, and a dihexyl acid-soluble moiety. As discussed above, the ‘392 and ‘082 patents merely mention a

broad genus, but fails to suggest selecting the specific moieties and combine them in the special order as shown in formula (3). Thus, the polymer of formula (3) is not obvious over the two cited references.

The polymer of formula (4) is identical to that recited in claim 7. For the reasons set forth above, it is not obvious over the two cited references.

The polymer of formula (5) is identical to that recited in claim 9. As correctly pointed out by the Examiner, this polymer is not obvious over the two cited references. See the Office Action, page 3, line 3.

In sum, claim 11, covering a composition containing one of formulas (3)-(5), is not rendered obvious by the two cited references.

Claim 2 depends from claim 1, claim 8 depend from claim 7, and claims 12-16, depend from claim 11. For the reasons set forth above, these claims are also not rendered obvious by the two cited references.

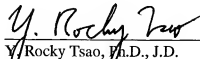
In conclusion, the grounds for the rejection of claims 1,2 , 7, 8, and 11-16 have been overcome. The other pending claims, i.e., claims 3-6, 9, and 10, are allowable according to the Examiner. Applicants therefore request that the Examiner promptly allow this application.

Please apply any other charges to deposit account 06-1050.

Respectfully submitted,

Date: _____

5-28-07



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